

Application No. 10/044,896  
Amendment dated June 21, 2005  
Reply to Office Action of May 19, 2005

This listing of claims will replace all prior versions and listings of claims in the application:

**Listing of Claims:**

1. (Currently amended) An anti-IFN- $\alpha$  monoclonal antibody which binds to and neutralizes a biological activity of at least IFN- $\alpha$  subtypes[ $\alpha$ 1, IFN- $\alpha$ 2, IFN- $\alpha$ 4, IFN- $\alpha$ 5, IFN- $\alpha$ 8, IFN- $\alpha$ 10, and IFN- $\alpha$ 21.
2. (Withdrawn) The antibody of claim 1 which is a murine antibody.
3. (Original) The antibody of claim 1 which is a humanized antibody.
4. (Withdrawn) The antibody of claim 1 which is a human antibody.
5. (Original) The antibody of claim 1 wherein said biological activity is antiviral activity.
6. (Original) The antibody of claim 5 wherein said antibody is capable of neutralizing at least 70% of the antiviral activity of said IFN- $\alpha$  subtypes.
7. (Original) The antibody of claim 5 wherein said antibody is capable of neutralizing at least 80% of the antiviral activity of said IFN- $\alpha$  subtypes.
8. (Original) The antibody of claim 5 wherein said antibody is capable of neutralizing at least 90% of the antiviral activity of said IFN- $\alpha$  subtypes.
9. (Original) The antibody of claim 5 wherein said antibody is capable of neutralizing at least 99% of the antiviral activity of said IFN- $\alpha$  subtypes.

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10. (Cancelled)

11. (Previously presented) The antibody of claim 1 which is murine anti-human IFN- $\alpha$  monoclonal antibody 9F3 comprising an amino acid sequence of the monoclonal antibody produced by a hybridoma having ATCC Accession No. PTA-2917, or progeny thereof or a humanized or chimeric form thereof.

12. (Previously presented) The antibody of claim 11 which is humanized anti-human IFN- $\alpha$  monoclonal antibody comprising a light chain variable domain of SEQ ID NO:3 and a heavy chain variable domain of SEQ ID NO:5.

13. (Original) The antibody of claim 1 which binds essentially the same IFN- $\alpha$  epitope as the anti- IFN- $\alpha$  antibody produced by the hybridoma cell line deposited with ATCC on January 18, 2001 and having accession No. PTA-2917.

14. (Original) The antibody of claim 1 which is of the IgG class.

15. (Original) The antibody of claim 14 which has an IgG<sub>1</sub>, IgG<sub>2</sub>, IgG<sub>3</sub>, or IgG<sub>4</sub> isotype.

16. (Original) The antibody of claim 1 which is an antibody fragment.

17. (Original) The antibody of claim 16 which is a Fab fragment.

18. (Original) The antibody of claim 16 which is a F(ab')<sub>2</sub> fragment.

19. (Original) The antibody of claim 16 which is a Fab' fragment.

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20. (Currently amended) An anti-IFN- $\alpha$  antibody, or antigen binding fragment thereof, comprising a heavy chain variable domain and a light chain or an antigen binding fragment thereof variable domain, wherein the light chain variable domain comprises the following CDR's:

- (a) L1 of the formula RASQSVSTSSYSYMH (SEQ ID NO: 7);
- (b) L2 of the formula YASNLES (SEQ ID NO: 8); and
- (c) L3 of the formula QHSWGIPRTF (SEQ ID NO: 9).

21. (Currently amended) The anti-IFN- $\alpha$  antibody ~~light chain antigen binding fragment of claim 20 which is a Fab the light chain variable domain.~~

22. (Currently amended) An anti-IFN- $\alpha$  antibody, or antigen binding fragment thereof, comprising a light chain variable domain and heavy chain variable domain or an antigen binding fragment thereof, wherein the heavy chain variable domain comprises the following CDR's:

- (a) H1 of the formula GYTFTEYJIH (SEQ ID NO: 10);
- (b) H2 of the formula SINPDYDITNYNQRFKG (SEQ ID NO: 11); and
- (c) H3 of the formula WISDFFDY (SEQ ID NO: 12).

23. (Currently amended) The anti-IFN- $\alpha$  antibody ~~heavy chain antigen binding fragment of claim 22 which is a Fab the heavy chain variable domain.~~

24. (Previously presented) An anti-IFN- $\alpha$  antibody comprising
- (A) at least one light chain or an antigen binding fragment thereof, comprising the following CDR's:
    - (a) L1 of the formula RASQSVSTSSYSYMH (SEQ ID NO: 7);
    - (b) L2 of the formula YASNLES (SEQ ID NO: 8); and
    - (c) L3 of the formula QHSWGIPRTF (SEQ ID NO: 9); and
  - (B) at least one heavy chain or an antigen binding fragment thereof, comprising the following

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CDR's:

- (a) H1 of the formula GYTFTEYIIH (SEQ D NO: 10);
- (b) H2 of the formula SINPDYDITNYNQRFKG (SEQ ID NO: 11); and
- (c) H3 of the formula WISDFFDY (SEQ ID NO: 12).

25. (Original) The antibody of claim 24 having a homo-tetrameric structure composed of two disulfide-bonded antibody heavy chain-light chain pairs.

26. (Original) The antibody of claim 24 which is a linear antibody.

27. (Withdrawn) The antibody of claim 24 which is a murine antibody.

28. (Original) The antibody of claim 24 which is a chimeric antibody.

29. (Original) The antibody of claim 24 which is a humanized antibody.

30. (Withdrawn) The antibody of claim 24 which is a human antibody.

31-41. (Cancelled)

42. (Previously presented) A hybridoma cell line comprising a nucleic acid molecule encoding an antibody of claim 1.

43. (Original) A hybridoma cell line deposited with ATCC on January 18, 2001 and having accession No. PTA-2917.

44. (Original) An antibody produced by the hybridoma cell line of claim 42.

45. (Original) A pharmaceutical composition comprising an effective amount of the

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antibody of claim 1 in admixture with a pharmaceutically acceptable carrier.

46. (Original) A pharmaceutical composition comprising an effective amount of the antibody of claim 11 in admixture with a pharmaceutically acceptable carrier.

47. (Original) A pharmaceutical composition comprising an effective amount of the antibody of claim 12 in admixture with a pharmaceutically acceptable carrier.

48. (Original) A pharmaceutical composition comprising an effective amount of the antibody of claim 24 in admixture with a pharmaceutically acceptable carrier.

49.-54. (Cancelled)

55. (new) An anti-IFN- $\alpha$  antibody of claim 1 which does not bind to or neutralize IFN- $\beta$ .

56. (new) An anti-IFN- $\alpha$  antibody of claim 1 which binds to and neutralizes all IFN- $\alpha$ 1 subtypes.

57. (new) A cell line comprising a nucleic acid molecule encoding an antibody of claim 1.

58. (new) A cell line comprising a nucleic acid molecule encoding an antibody of claim 24.

59. (new) A cell line comprising a nucleic acid molecule encoding an antibody of claim 12.